

## **OPTICAL DEVICE WITH CONFIGURABLE CHANNEL ALLOCATION**

### **ABSTRACT**

An optical device for discretionary treatment of channels of an optical beam, the optical device comprising: (a) a port for at least transmitting or receiving a first beam having a plurality of channels; (b) a wavelength discriminating device optically coupled to the port, the wavelength discriminating device adapted for at least one of receiving the first beam and diffracting the beam into a plurality of channel beams or receiving a plurality of channel beams and combining the channel beams into the first beam; and (c) an array of reflective elements, the reflective elements exceeding the number of channels, at least a portion of the reflective elements being optically coupled to the wavelength discriminating device to reflect the channel beams, at least two reflective elements of the portion corresponding to a particular channel beam, the at least two reflective elements being controllable to effect a desired output of the particular channel beam.